
AN ACTION RESEARCH MODEL FOR PERSISTENT IMPROVEMENT OF CONTINUOUS PROFESSIONAL DISTANCE EDUCATION (CPDE) PROGRAMMES

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Introduction and Background

The purpose of this paper is to present an educational management model, to support action research into issues relating to the management of distance learning programmes. The specific area addressed here is that of the management of Continuing Professional Distance Education (CPDE) programmes. Two different components are distinguishable in the term CPDE: CPD as Continuous Professional Development and DE as Distance Education. Both fields of educational studies have been extensively and separately studied and researched. Nevertheless, the emergence of new Educational Technologies (EdT) and professional development needs, due to the pressures of the Information Society, have created the need for the merger of these previously separated modes of teaching and learning. This has revealed a number of new issues involving new learning approaches, course delivery and more importantly programme management. This research focuses on and seeks to study these latter problems.

What is CPDE e-learning?

The British Computer Society (BCS) presents a definition of CPD proposed by the Engineering Council (1994) as follows: “The systematic maintenance, improvement and broadening of knowledge and skill and the development of personal qualities necessary for the execution of professional and technical duties throughout the individual’s working life”. According to Moore & Kearsley’s (1996), cited by Passerini & Granger (2000:2), DE could be defined as: “[...] planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as organisational and administrative arrangements”.

However, DE is slowly incorporating emerging modes of delivery. Sometimes even, the term is interchangeably used with terms such as: *Open Learning*, *Networked Learning*, *Virtual Learning* and the very recent *e-Learning*. These terms are frequently used to describe DE associated to a particular delivery environment for courses that are not wholly delivered using traditional face-to-face, on-campus lectures within HE (Higher Education). The main characteristic linking all these terms is the use of new Information and Communication Technologies (ICT) as a delivery vehicle. These new EdTs are the result of the convergence of computing and telecommunications, and the resulting development of ICTs such as e-mail, video conferencing and bulletin board systems. This has provided new opportunities for sharing information and interaction between individuals and groups. Benefits of ICT course delivery for the learner and the tutor and the institutions, have been discussed by a number of authors such as Stamatis et al. (1999), Nunes & Fowell, (1996), Eisenstadt (1998), and could be summarised as follows: electronic distribution of course material; flexibility for students - when to study, at what pace - supporting different learning styles; accommodation of different ability levels; establishment of communication between students and tutors, and between students; greater access to information; greater flexibility in maintaining and up-dating course documentation.

For the remainder of this paper the term *e-Learning* will be used to summarise the characteristics of these overlapping delivery methods and will be used as an umbrella term for all EdT and Internet based learning.

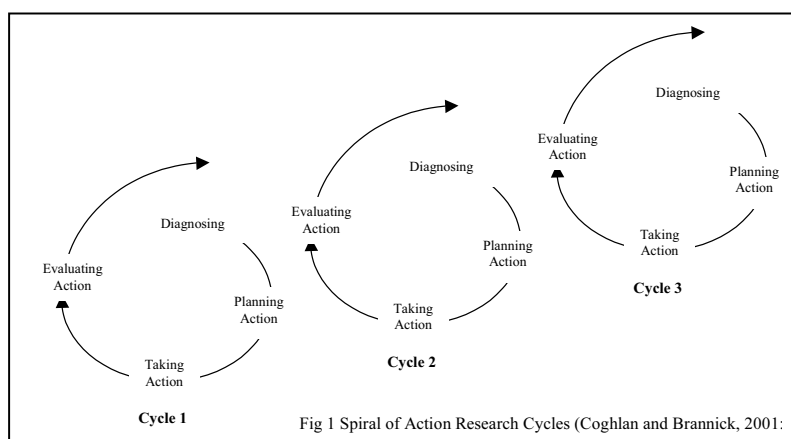
Challenges posed by CPDE e-Learning

There is a rich and extensive body of research addressing issues related to e-Learning. However most of this research addresses issues of learning and teaching, i.e. learning experience, pedagogic approaches, tutoring strategies, design of online environments, etc. Nevertheless, for CPDE courses to be successful, it is not enough that the courses are well designed, the modules adopt appropriate pedagogic approaches and that tutors are well versed in their subject matter areas and are able to facilitate the courses online. In fact it is also imperative to pay attention to surrounding issues such as institutional and organisational strategy, management processes, and programme structure. Managing these new online programmes poses a new set of challenges and problems that need to be carefully considered and researched.

There is considerable experience in managing these programmes that is based on practice, but is scattered throughout the higher education system, both in the UK and Europe. In truth, the increasing success of this type of distance education is based on successful management strategies and criteria emerging from this practical experience and has been the basis for the rapid expansion of CPDE programmes. Yet, because academics involved in setting up CPDE programmes have tended to concentrate on teaching and learning issues, rather than on management issues, there is very little integrative research incorporating this element of CPDE e-Learning. Therefore, there is the need to review, analyse and classify cases showing best practice in this area. The body of knowledge emerging from such distillation should then be established as good practice and disseminated through academic and practitioner channels to inform management practice. This paper aims at presenting one such successful case, identifying a CPDE management model. This model conjugated with action research, enabled persistent improvement of a CPDE course and is behind the success of this research team.

Action Research

The educational model proposed is grounded on a practitioner action research approach as the guide for everyday work and professional life (Stringer, 1999:43). It is therefore assumed that the model will evolve and change according to the fluid needs, requirements and learning approaches of CPDE students. Therefore action research is highly appropriate to the development of e-Learning, where experience suggests that significant modifications to the traditional paradigm of the supply of higher education are required (HEFCE, 2000). These required changes imply not only alterations in course models, but also development of new attitudes, in order to accommodate the new challenges posed by e-Learning in general and CPDE in particular. Cohen and Manion (1994) proposed that the most suitable approach for educational research in general, and educational informatics in particular, is to use a 'methodological pluralism'. Given that the emphasis of this particular research is to concentrate



on educational models and e-learning issues, it was felt that a positivist approach would have been inappropriate. Action research is a pluralist research approach that is based on the assumption that the mere recording of events and formulation of explanations by an uninvolved researcher is inadequate in and of itself.

Furthermore, Stringer (1999:7) proposes that those who have previously been designated as “*subjects*” should actually participate directly in research processes and that those processes should be applied in ways that benefit all participants directly. Therefore action research is more than the traditional interpretative research in the sense that the researcher is directly involved in the research setting and in the experience itself. More specifically, the model proposed by this study draws on the framework suggested by Coghlan and Brannick (2001:11). Action research results from spiral research cycles,

starting with a process of identifying a problem area – a *pre-step* often based on the previous experience in the field of the researcher. The actual cycle comprises *Diagnosis* (data gathering, analysis and representation), *Action Planning*, *Action Taking*, and *Action Evaluation* as shown in Fig. 1.

An Educational Management Action Research (EMAR) Model for CPDE Courses

The Educational Management Action Research (EMAR) model proposed in Fig. 2 is intended to follow this spiral approach to enable course improvement, tutor development, management strategies maturation and infrastructure evolution. The model draws on an initial framework proposed and discussed by Goodyear (1999) and Khakhar (2000). This initial framework was extremely useful as first attempt to build a general CPDE management framework. However, as Goodyear (1999) acknowledges, it is only a starting point for discussion and is in danger of oversimplifying complex relationships and processes. Furthermore, it does not accommodate evaluation and persistent improvement as required by CDPE programmes.

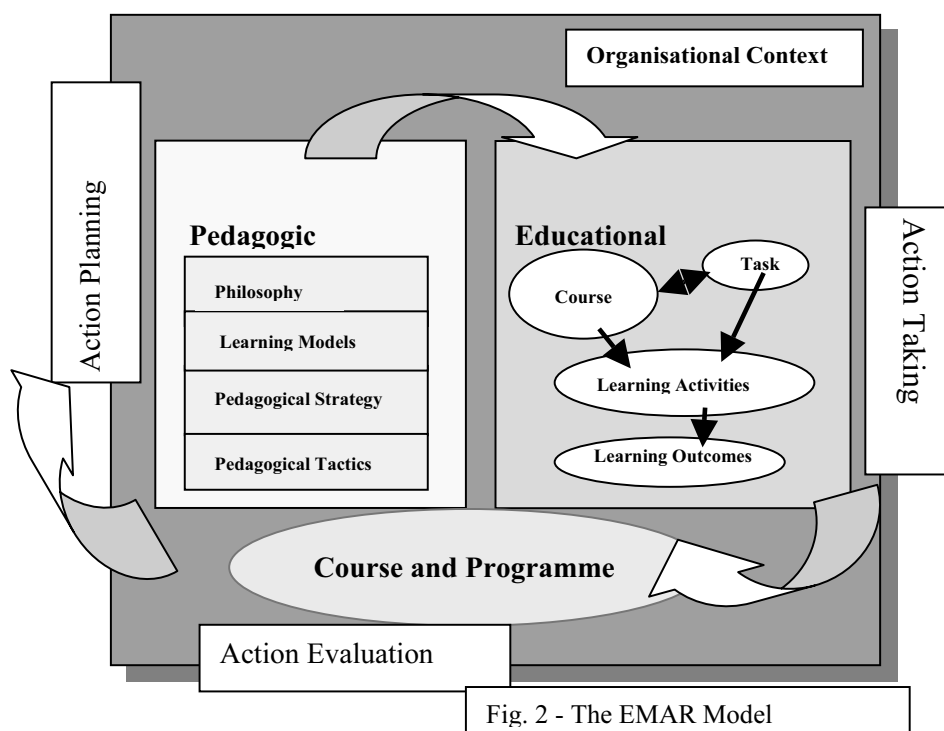


Fig. 2 - The EMAR Model

The pedagogical model adopted for CPDE is usually proposed by the curriculum designer and the course team. As discussed above, there are a number of such models suggested in the literature. Different models would impact on the design of the educational setting, that is, the corresponding tutoring strategies, learning tasks and activities, learning outcomes, support mechanisms and ICT technologies to be used.

In fact, the educational setting depends on the curriculum design for particular courses within the organisational context and following a particular pedagogical model. Curriculum design is a process by which the course aims and objectives, content, delivery mode and assessment procedures of a course are decided, taking into consideration different factors that affect the whole programme, such as (Nunes et. al, 2000): the student and his/her knowledge about the subject; the specific nature of the subject matter; the subject matter expert and the way she/he does things; the method and media of delivery. This process of curriculum design determines the syllabus, the content materials, the learning tasks, the resulting learning activities and the ICT learning environment. The conjunction of these five factors forms the educational setting.

The fundamental contention of the action researcher is that complex social processes can be best studied by introducing changes into practice and observing the effects of these changes (Baskerville,

1999). Therefore, the most important part of any educational action research model is evaluation. According to Thorpe (1990:5), evaluation is the collection, analysis and interpretation of information about any aspect of a programme of education and training, as part of a recognised process of judging its effectiveness, its efficiency and any other outcomes it may have. Assessment is an integral part of the programme and although part of evaluation, should not be considered as evaluation *per se* (McPherson and Nunes, 2001), could further elaborated as a process with the following characteristics: inclusiveness – all activities related to the learning process should be monitored and analysed; component activities – usually evaluation is composed of three components, data collection, analysis and interpretation; planned activities capable of providing useful feedback and remedial action into the programme whenever needed; both intended and unintended effects – scope of evaluation should not be limited to overt objectives of a programme, but should include any unintended effects and occurrences.

Conclusions

This research paper results from ongoing work undertaken at Department of Information Studies of the University of Sheffield into Curriculum and Instructional Design for CPDE. The model emerged from a seven year process of action research and ongoing formative evaluation of an MA in Information Technology Management (MA ITM) CPDE programme.

It is important to reflect whether this model can be applicable to other CPDE courses, as a generalisation from one single case study. According to Yin (1989:21), scientific facts are rarely based on single experiments. Theory is usually based on a multiple set of experiments, which have replicated the same phenomenon under different conditions. Hence, this model can not be considered as definitive yet. Further studies are required to establish whether the EMAR model is applicable in similar educational settings. This is already been done by this research team, who have already secured funding to develop a university-wide CPDE course template based on this model.

References

- British Computer Society (1994) *CPD – Continuing Professional Development – Advice for Members*, [Engineering Council definition] <http://www.bcs.org.uk/cpd/> [Accessed 22/03/01]
- Coghlan, D. & Brannick, T. (2001) *Doing Action Research in Your Own Organisation*, London: Sage Publications, Ltd.
- Cohen, L. & Mannion, L. (1995) *Research Methods in Education*, 4th Edition. London: Routledge.
- Eisenstadt M & Vincent T (eds) (1998) *The Knowledge Web. Learning and Collaborating on the Net*, London: Kogan Page
- Goodyear, P. (1999) *Pedagogical Frameworks and Action Research in Open and Distance Learning*, CSALT Working Paper 99-4-1, Lancaster University: <http://domino.lancs.ac.uk/edres/csaltdocs.nsf> [last visited 10/05/2001]
- HEFCE (2000) *Business model for the e-University*. http://www.hefce.ac.uk/Pubs/hefce/2000/0044/00_44rep.doc [last visited 23/10/2000]
- Khakar, D. "Guidelines for Evaluation of the Framework" *In* Wills, C.; Quirchmayr, G.; Pernul, G. & Khakhar, D.(Eds.) *Evaluation of Frameworks for Open and Distance Learning*, Socrates Project Report 3, 56605-CP-1-99-SE-ODL-ODL.
- Lewis, R. (1985) "How to Develop and Manage an Open Learning Scheme". *Open Learning Guide 5*, Council for Education Technology
- McPherson, M. and Nunes, J.M. (2001) "The role of evaluation processes in professional continuing education programmes: a case study" *In Proceedings of the University of the 21st Century: an International Conference* sponsored by UNESCO, Muscat, Sultanate of Oman, 17-19 March 2001.
- Nunes, J.M.; McPherson, M. & Rico, M. (2000) Instructional Design of a Networked Learning Skills Module for Web-based Collaborative Distance Learning. *In Proceedings of the European Conference on Web-Based Learning Environments (WBLE 2000)*, Faculty of Engineering, University of Porto, Porto, Portugal, 5-6 of June 2000, 95-103.

Passerini K & Granger M J (2000) "A Developmental Model for Distance Learning Using the Internet". *Computers & Education* Vol. 34, Issue 1, 1 Jan 2000, pp 1-15

Stamatis D, Kefalas, P. & Kargidis, T. (1999) *A Multi-Agent Framework to Assist Networked Learning*, *Journal of Computer Assisted Learning* Vol. 15, No 3, Sep 1999, pp 201 - 210 [Blackwell Science Ltd]

Stringer, E. T. (1999) *Action Research, 2nd Edition*. California: Sage Publications, Inc.

Thorpe M. (1990) *Evaluating Open and Distance Learning*. Harlow, Essex: Longman Group UK.

Yin, R. 1989, *Case Study Research: Design and Methods*, Revised Edition, London, Sage Publications.

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